

1. A recycle system of aqueous paint comprising:  
coating an article to be coated with an aqueous paint in a water-curtain-type coating booth,  
collecting an over-spray paint that does not adhere with the article by water-curtain,  
sending the collected solution to a condensation bath through a booth circulation water bath,  
separating it by a ultrafiltration apparatus into condensed paint and filtrate, the condensed paint being transferred to a paint tank, and  
taking the condensed paint out of the paint tank if necessary to adjust, followed by coating it as an aqueous paint,  
wherein a total amount of liquid present within the recycle system is controlled constant during spray-coating.

15                    2. The recycling system of aqueous paint according to claim 1  
wherein a total of a volume ( $V_w$ ) of the booth circulation water, a volume  
( $V_x$ ) of the filtrate, a volume ( $V_y$ ) of the collected solution in the  
condensation bath, and a volume ( $V_z$ ) of the condensed paint in the paint  
tank, that is ( $V_w+V_x+V_y+V_z$ ), is kept constant.

20                    3. The recycling system of aqueous paint according to claim 1,  
wherein, in case where the system further comprises a settling tank for  
storing the booth circulation water and a rinse tank for storing filtrate taking  
out of the filtrate bath, a total of a volume ( $V_w$ ) of the booth circulation  
water, a volume ( $V_x$ ) of the filtrate, a volume ( $V_y$ ) of the collected solution  
25                    in the condensation bath, a volume ( $V_z$ ) of the condensed paint in the paint

tank, a volume ( $V_s$ ) of the booth circulation water in the settling tank and a volume ( $V_t$ ) of the filtrate in the rinse tank, that is ( $V_w+V_x+V_y+V_z+V_s+V_t$ ), is kept constant.

4. The recycle system of aqueous paint according to claim 1, wherein  
5 after operating the recycle system a certain period of time and stopping spray-coating, a necessary amount of the filtrate for cleaning the coating booth is sent from the filtrate bath to the spray-coating booth to clean inside the coating booth, and then sent to the condensation bath, followed by re-starting spray-coating, thus keeping the liquid content of the recycle system  
10 constant.

5. The recycle system of aqueous paint according to claim 1, wherein  
after operating the recycle system a certain period of time and stopping spray-coating, a necessary amount of the filtrate for cleaning the coating booth is sent from the filtrate bath to the spray-coating booth to clean inside  
15 the coating booth, and then spray-coating re-starts, followed by supplying water into the condensation bath, thus keeping the liquid content of the recycle system constant.

6. The recycle system of aqueous paint according to anyone of  
claims 1 to 5, wherein the condensed paint is adjusted by adding another  
20 aqueous paint and volatile component and re-used as aqueous paint.